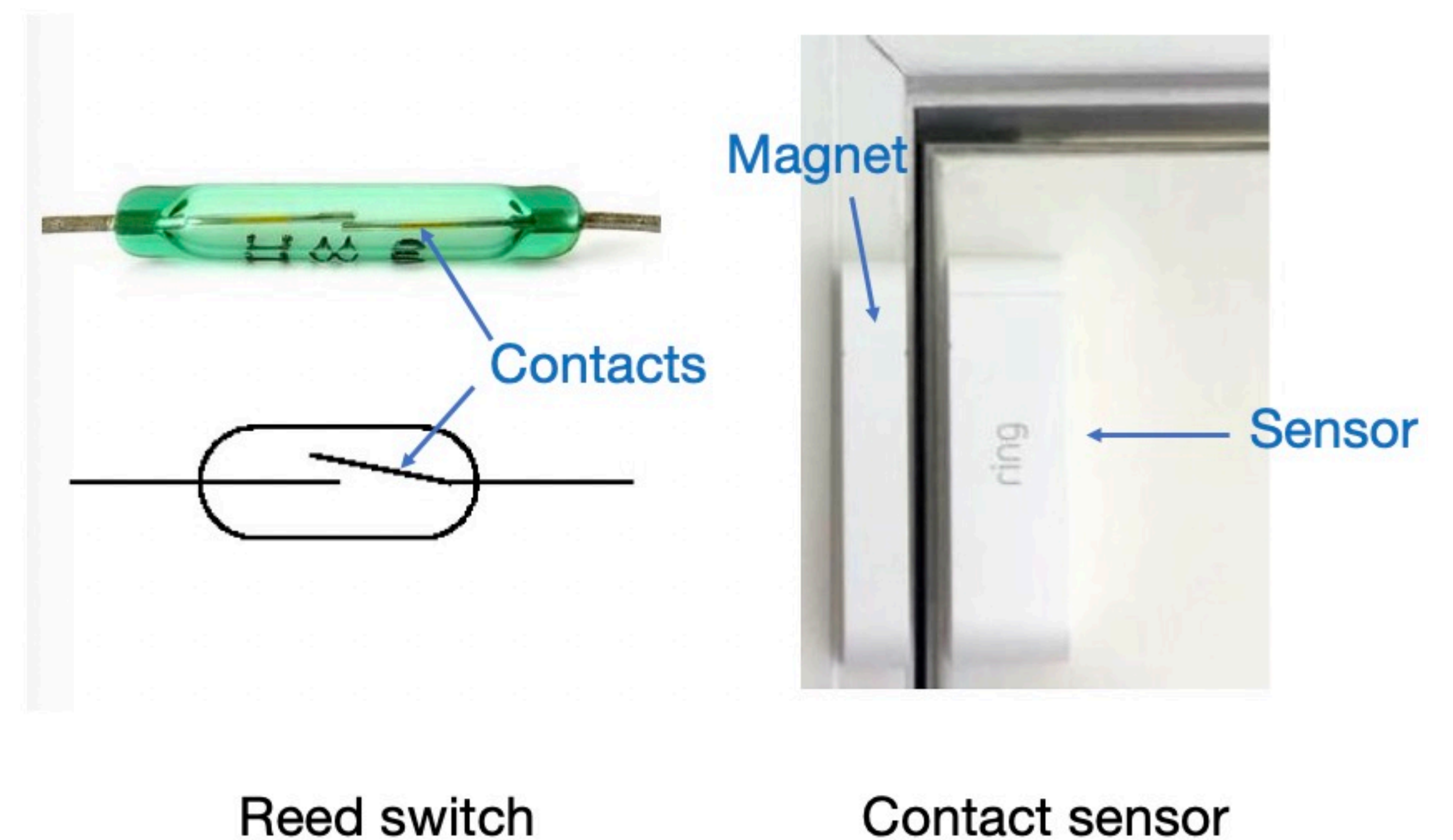
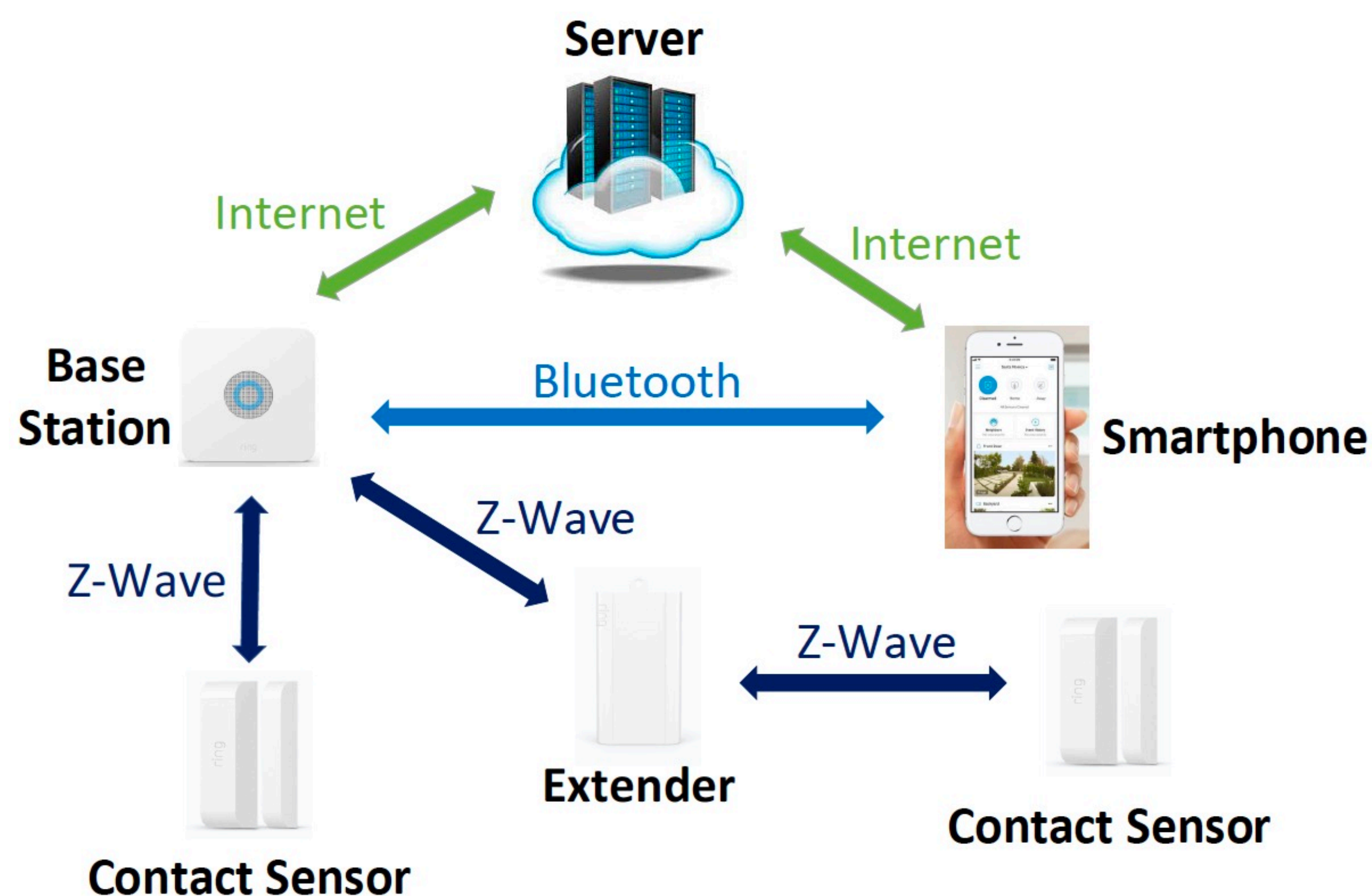


Your Home is Insecure: Attacks and Countermeasures on Wireless Home Alarm Systems

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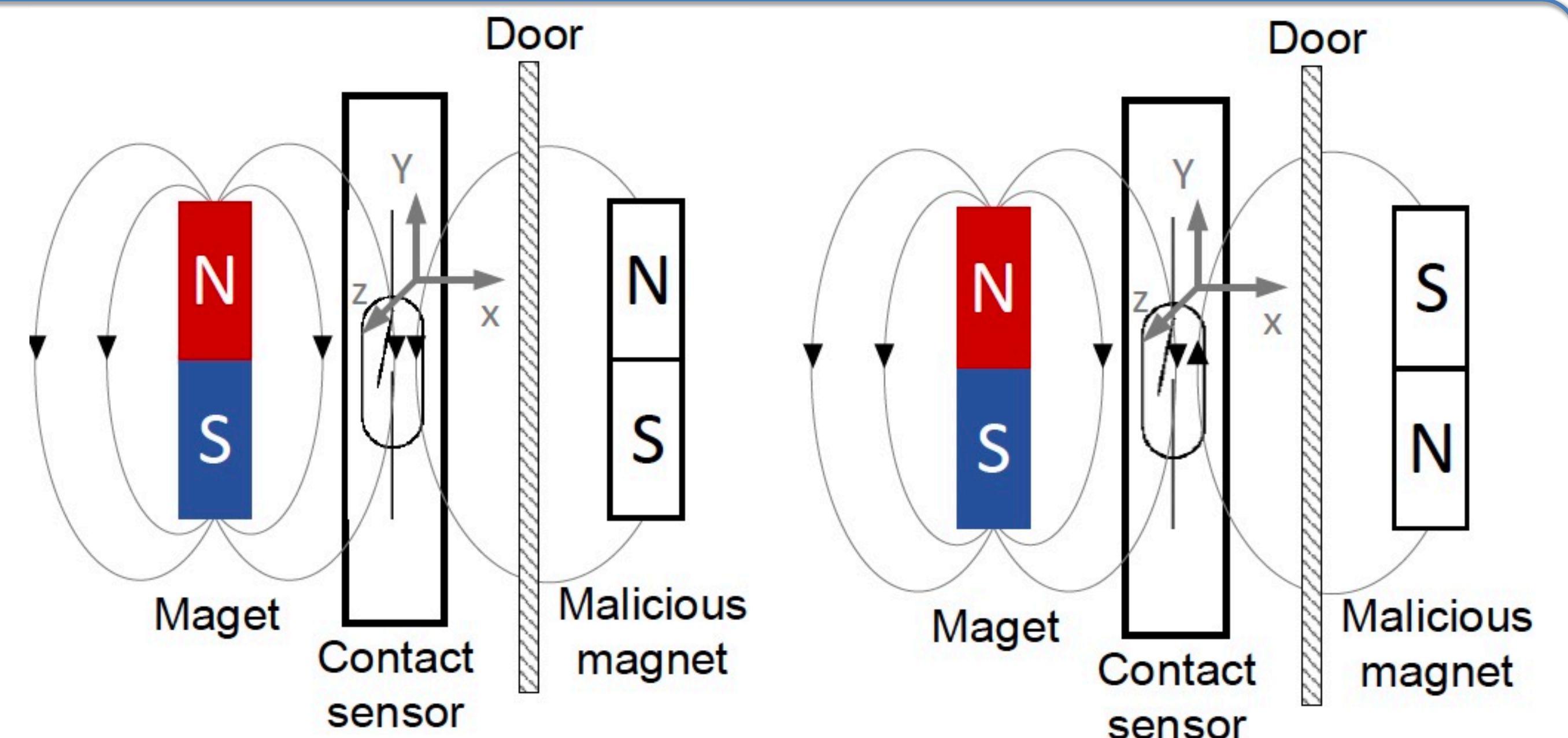
The objective of this project is to develop countermeasures against potential attacks targeting the physical components (e.g., the reed switch) of the popular wireless home alarm systems.



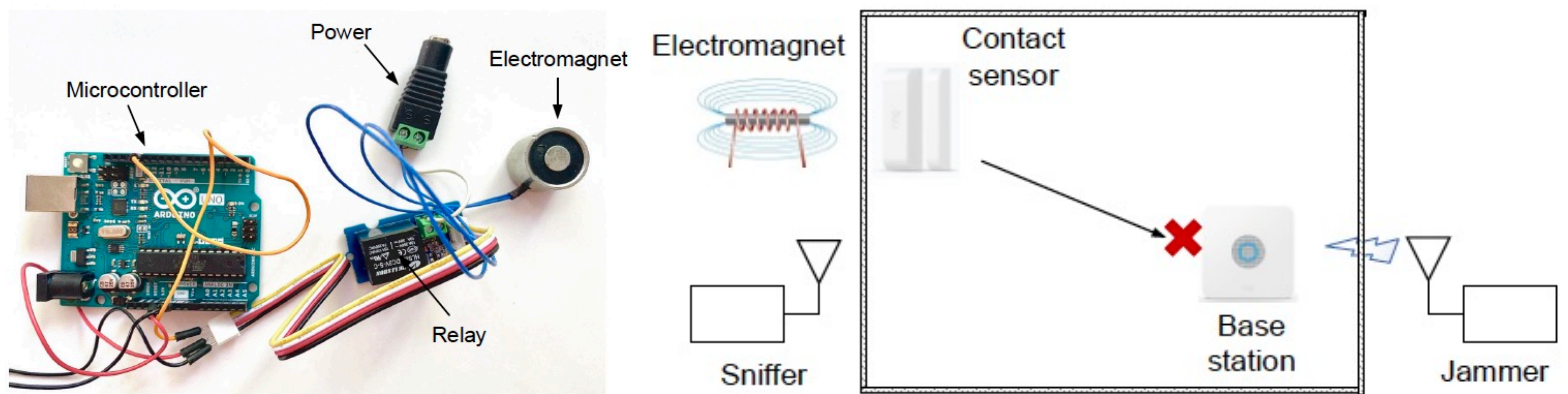
Event Eliminating and Spoofing

In event-eliminating attacks, attackers use a malicious magnet of the same polarity to eliminate alarms from contact sensors.

In event-spoofing attacks, attackers use a malicious magnet of the opposite polarity to generate fake alarms.



Automatic and Stealthy Battery-depletion Attack



Countermeasures

- 1, Moving detection on the contact sensor.
- 2, Jamming signal detection on the base station.